

In the Claims

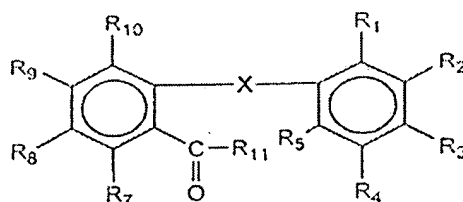
Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1-22. Canceled.

23. (Previously presented) A method for inhibiting calcium channel activity in a cell having a calcium channel comprising:

contacting the cell having the calcium channel with a compound in an amount effective to inhibit calcium channels,

wherein the compound has the general structural formula:



wherein R₁, R₂, R₃, R₄, R₅, R₇, R₈, R₉, and R₁₀ independent of one another, are selected from the group consisting of -H, halogen, piperonyl, (C₁-C₆) alkyl, (C₁-C₆) alkenyl, (C₁-C₆) alkynyl, (C₁-C₆) alkoxy -CN, -OR', -SR', -NO₂, -NR'R', amino acid, -C(O)R', -C(S)R', -C(O)OR', -C(S)OR', -C(O)SR, -C(S)SR', -C(O)N(R')₂, -C(O)C(O)R', -C(S)C(O)R', -C(O)C(S)R', -C(S)C(S)R', -C(O)C(O)OR', -C(S)C(O)OR', -C(O)C(S)OR', -C(O)C(O)SR', -C(S)C(S)OR', -C(S)C(O)SR', -C(O)C(S)SR', -C(S)C(S)SR', -C(O)C(O)N(R')₂, -C(S)C(O)N(R')₂, -C(O)C(S)N(R')₂, or -C(S)C(S)N(R')₂;

wherein R₁₁ is selected from the group consisting of -NH-CH₂CH₂NH₂, -NH-CH₂CH₂N-(CH₂)_z-H, -N•(CH₂)₂N R₁₅•(CH₂)₂, -R', -OR', -SR', -NO₂, -N(R')₂, -CO-R', -CS-R', -CO-OR', -CS-OR', -CO-SR', -CS-SR', -CO-N(R')₂, and -CS-N(R')₂;

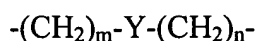
wherein each R' is (CH₂)_z -NR''R'' and wherein R'' is independently selected from the group consisting of (C₁-C₆) alkyl, (C₁-C₆) alkenyl, (C₁-C₆) alkoxy, (C₁-C₆) alkynyl, (C₆-C₂₀)

aryl, (C₆-C₂₀) substituted aryl, (C₆-C₂₆) alkaryl, substituted (C₆-C₂₆) alkaryl, and (C₅-C₇) heteroaryl wherein at least one atom of the heteroaryl is selected from the group consisting of a sulfur, a nitrogen, or an oxygen atom, wherein the aryl and alkaryl substituents are each independently selected from the group consisting of hydrogen, halogen, (C₁-C₆) alkyl, (C₁-C₆) alkenyl, (C₁-C₆) alkynyl and trihalomethyl;

wherein z is 1-6;

wherein R₁₅ is selected from the group consisting of halogen, (C₁-C₆) alkyl, (C₁-C₆) alkenyl, (C₁-C₆) alkynyl, and (C₁-C₆) alkoxy;

wherein X is a group having the following formula;

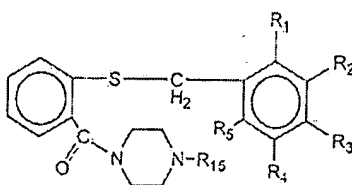


wherein Y is selected from the group consisting of S, N, and O; and

wherein m and n, independent of one another, are integers of 0-5.

24. (Original) The method of claim 23, wherein R₁₁ is selected from the group consisting of -NH-CH₂CH₂NH₂ and -NH-CH₂CH₂N-(CH₂)_z-H and wherein Y is S, m is 0 and n is 1-4.

25. (Original) The method of claim 24, wherein the compound has the general structural formula:

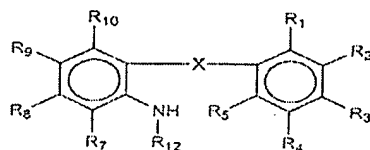


wherein R₁₅ is selected from the group consisting of halogen, (C₁-C₆) alkyl, (C₁-C₆) alkenyl, (C₁-C₆) alkynyl, and (C₁-C₆) alkoxy.

26. (Previously presented) A method for inhibiting calcium channel activity in a cell having a calcium channel comprising:

contacting the cell having the calcium channel with a compound in an amount effective to inhibit calcium channels,

wherein the compound has the general structural formula:



wherein $R_1, R_2, R_3, R_4, R_5, R_7, R_8, R_9$, and R_{10} independent of one another, are selected from the group consisting of -H, halogen, piperonyl, (C_1-C_6) alkyl, (C_1-C_6) alkenyl, (C_1-C_6) alkynyl, (C_1-C_6) alkoxy -CN, -OR', -SR', -NO₂, -NR'R', amino acid, -C(O)R', -C(S)R', -C(O)OR', -C(S)OR', -C(O)SR, -C(S)SR', -C(O)N(R')₂, -C(O)C(O)R', -C(S)C(O)R', -C(O)C(S)R', -C(S)C(S)R', -C(O)C(O)OR', -C(S)C(O)OR', -C(O)C(S)OR', -C(O)C(O)SR', -C(S)C(S)OR', -C(S)C(O)SR', -C(O)C(S)SR', -C(S)C(S)SR', -C(O)C(O)N(R')₂, -C(S)C(O)N(R')₂, -C(O)C(S)N(R')₂, or -C(S)C(S)N(R')₂;

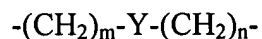
wherein R_{12} is selected from the group consisting of -CO-NH-CH₂CH₂NH₂, -CO-NH-CH₂CH₂N-(CH₂)_z-H, and -CO -N•(CH₂)₂N R_{15} •(CH₂)₂;

wherein each R' is (CH₂)_z -NR''R'' and wherein R'' is independently selected from the group consisting of (C_1-C_6) alkyl, (C_1-C_6) alkenyl, (C_1-C_6) alkoxy, (C_1-C_6) alkynyl, (C_6-C_{20}) aryl, (C_6-C_{20}) substituted aryl, (C_6-C_{26}) alkaryl, substituted (C_6-C_{26}) alkaryl, and (C_5-C_7) heteroaryl wherein at least one atom of the heteroaryl is selected from the group consisting of a sulfur, a nitrogen, or an oxygen atom, wherein the aryl and alkaryl substituents are each independently selected from the group consisting of hydrogen, halogen, (C_1-C_6) alkyl, (C_1-C_6) alkenyl, (C_1-C_6) alkynyl and trihalomethyl;

wherein z is 1-6;

wherein R_{15} is selected from the group consisting of halogen, (C_1-C_6) alkyl, (C_1-C_6) alkenyl, (C_1-C_6) alkynyl, and (C_1-C_6) alkoxy;

wherein X is a group having the following formula;



wherein Y is selected from the group consisting of S, N, and O; and

wherein m and n, independent of one another, are integers of 0-5.

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27-57. (Canceled).